

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Patent Application of  
Manuel Angel Albarran Moyo et al.  
Application No. 10/571,075  
Filed: September 13, 2007  
For: Data Structure for an Electronic  
Document and Related Methods

Group Art Unit: 2166  
Examiner: PHAM, Khanh B.  
Confirmation No.: 2399

**APPEAL BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is an Appeal Brief under Rule 41.37 appealing the decision of the Primary Examiner dated April 19, 2010 (the “final Office Action”). Each of the topics required by Rule 41.37 is presented herewith and is labeled appropriately.

**I. Real Party in Interest**

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 11445 Compaq Center Drive W., Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

**II. Related Appeals and Interferences**

There are no appeals or interferences related to the present application of which the Appellant is aware.

### **III. Status of Claims**

Claims 1-14 were withdrawn under a previous Restriction Requirement and were subsequently cancelled without prejudice or disclaimer. Claims 15-38 are pending in the application and stand finally rejected. Accordingly, Appellant appeals from the final rejection of claims 15-38, which claims are presented in the Appendix.

**IV. Status of Amendments**

No amendments have been filed subsequent to the final Office Action of April 19, 2010, from which Appellant takes this appeal.

### **V. Summary of Claimed Subject Matter**

A summary is given below of the subject matter defined in each of the independent claims on appeal and the subject matter defined in any claim on appeal reciting a “means plus function” clause in accordance with the requirements of 35 C.F.R. § 41.37(c)(1)(v). The citation to passages in the specification and drawings for each claim element does not imply that the limitations from the cited passages in the specification and drawings should be read into the corresponding claim elements. *See Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004); M.P.E.P. § 2111.01(II).

By way of background, without limitation of the claims, Figure 1 is a digital document 100 for use in a digital pen and paper system comprises a carrier 102 in the form of a single sheet of paper 104 with position identifying markings 106 printed on some parts of it to define pattern areas 107 of a position identifying pattern 108. Also printed on the paper 104 are further markings 109 which are clearly visible to a human user of the document 100. These markings make up the content of the document 100. In this case an example of a very simple two page questionnaire is shown, and the content includes a number of boxes 110, 112 which can be pre-printed with user specific information such as the user’s name 114 and a document identification number 116. The position identifying pattern 108 is only printed onto the parts of the document 100 which the user is expected to write on or mark, that is within the check boxes 118, the comments boxes 120, 121 and the send box 122.

*(Appellant’s specification, p. 9, l. 20 through p. 10, l. 9)*

Turning now to the claims, Appellant’s independent claims at issue in this appeal recite the following subject matter.

Claim 15:

A computer program product for generating an electronic document (100, 700, 800) (*Appellant's specification, p. 8, ll. 6-14*), the computer program product comprising:

a computer usable medium having computer usable program code embodied therewith (*Appellant's specification, p. 8, ll. 6-14*), the computer usable program code comprising:

computer usable program code configured to define the electronic document (100, 700, 800) (*Appellant's specification, p. 14, ll. 19-24*);

in which the computer usable program code comprises first (109, 802) and second (107; 804) portions of data (*Appellant's specification, p. 9, l. 20 through p. 10, l. 9*);

in which the first portion of data (109, 802) defines the content of the electronic document (100, 700, 800) (*Appellant's specification, p. 9, l. 23 through p. 10, l. 6*) and the second portion (107; 804) comprises data relating to a pattern of position identification markings (106, 130) (*Appellant's specification, p. 9, ll. 20-23*) such that, when the electronic document (100, 700, 800) is printed, a pattern reading device (300) is able to determine its position relative to the position identification markings (106, 130) (*Appellant's specification, p. 11, ll. 6-10*); and

in which the computer usable program code comprises a single data file with the first (109, 802) and second (107; 804) data portions being embedded within the data file (*Appellant's specification, p. 14, ll. 16-17; p. 18, l. 26 through p. 19, l. 7*).

Claim 32:

A system for producing an electronic document (100, 700, 800), the system comprising:

means for receiving the content (109, 802) of the electronic document (100, 700, 800) (*Appellant's specification*, p. 2, l. 28 through p. 3, l. 4; p. 19, ll. 19-31; p. 20, ll. 1-6),

means for receiving data defining a pattern of positional markings (107, 804) allocated to at least a portion of the document (100, 700, 800) (*Appellant's specification*, p. 2, l. 28 through p. 3, l. 4; p. 19, ll. 19-31; p. 20, ll. 1-6)); and

means for generating a data structure defining the electronic document (100, 700, 800) which data structure comprises first (109, 802) and second (107, 804) portions of data, the first portion of data (109, 802) defining the content (109, 802) and the second portion of data (107, 804) relating to the pattern (107, 804) (*Appellant's specification*, p. 2, l. 28 through p. 3, l. 4; p. 19, ll. 19-31; p. 20, ll. 1-6).

Claim 33:

A method for generating an electronic document (100, 700, 800) comprising creating an electronic file (800) and storing in that file (800) data and metadata, the data defining at least some content (109, 802) and the metadata relating to a pattern of position identification markings (106, 130) (*Appellant's specification*, p. 15, l. 30 through p. 16, l. 8; p. 16, l. 28 through p. 17, l. 7; p. 18, l. 4-17) arranged to allow a pattern reading device (300) to determine its position within the position identification markings (106, 130) (*Appellant's specification*, p. 11, ll. 6-10), the electronic file (800) capable of generating an electronic document (100, 700, 800) (*Appellant's specification*, p. 12, ll. 6-13; p. 14, ll. 19-24).



**VI. Grounds of Rejection to be Reviewed on Appeal**

The final Office Action raised the following grounds of rejection.

(1) Claim 32 was rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

(2) Claims 15-22 and 31-38 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,623,713 to Lapstun et al. (hereinafter Lapstun).

(3) Claims 23-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lapstun, in view of U.S. Patent No. 7,653,876 to Ethier et al. (hereinafter Ethier).

Accordingly, Appellant hereby requests review of each of these grounds of rejection in the present appeal.

## **VII. Argument**

(1) Claim 32 is directed to statutory subject matter under 35 U.S.C. § 101:

In the final Office Action, claim 32 was rejected because the claimed invention is allegedly directed to non-statutory subject matter. Specifically, the final Office Action states the following:

Claim 32 lacks the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 U.S.C. 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be composition of matter. . . . ***They are, at best, functional descriptive material per se.***  
(final Office Action, p. 2) (emphasis added).

Appellant respectfully disagrees. Claim 32 recites:

A system for producing an electronic document, the system comprising:  
    means for receiving the content of the electronic document,  
    means for receiving data defining a pattern of positional markings  
allocated to at least a portion of the document; and  
    means for generating a data structure defining the electronic document  
which data structure comprises first and second portions of data, the first  
portion of data defining the content and the second portion of data relating to  
the pattern.

Claim 32 includes several recitations that fall within or invoke 35 U.S.C. § 112, sixth paragraph. As such, “35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language ‘shall be construed to cover the corresponding structure described in the specification and equivalents thereof.’” MPEP § 2181.

Appellant respectfully asserts that all the recitations of claim 32 are supported by corresponding structure described in the specification. For example, support for the recitation “means for receiving the content of the electronic document” may be found in the specification as only one of potentially many embodiments, at, for example, page 2, line 28

through page 3, line 4 in which it is disclosed that, “it may be simpler . . . to transfer the electronic document defined by the data structure to various locations between *processing apparatus*, etc., to electronically process the document and the like.” Further support for this recitation may be found at; for example, page 19, lines 19-31 in which the following is disclosed:

[A] *printer* or other *processing device* used to print the file 800, or otherwise process it, is arranged to recognize the non-printable text characters, by means of the non-valid font definition. The *printer*, or other *processing device*, interprets the data defining the non-printable text characters in a different manner to standard, printable, text characters as identifying the size, shape, and position of the required pattern areas 718, 720, 721, 722.  
(Emphasis added).

Finally, still further support for this recitation may be found at; for example, page 20, lines 1-6, in which it is disclosed that “[t]hese tags alert the printer, or other *processing device*, to the fact that the data between them is to be interpreted as a definition of the pattern areas 718, 720, 721, 722.” Therefore, it is clear that the recitation “means for receiving the content of the electronic document” may find support in the recitation of a printer, or, in other embodiments, a processing device.

Further, support for the recitations “means for receiving data defining a pattern of positional markings allocated to at least a portion of the document,” and “means for generating a data structure defining the electronic document which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern” may be found at similar portions of Appellant’s specification.

Thus, it is clear that each of the recitations of claim 35 *are* supported by corresponding structure or structures described in the specification. Therefore, in light of

these arguments, Appellant respectfully asserts that claim 32 is in compliance with 35 U.S.C. § 101, and the rejection of claim 32 should not be sustained.

Further, concerning Appellant's arguments presented in the response filed March 18, 2010, (See, Appellant's Response of March 18, 2010, pp. 12-14) the final Office Action further argues the following:

[A]ll portions of the specification referred to by applicant indicate that the means recited in the claim are implemented using software, for example, "graphic user interface", "printer driver" are software components. Therefore, the claimed system recited in claim 32 ***is software per se, lacks the physical article or objects to constitute a machine or manufacture*** within the meaning of 35 U.S.C 101.

(final Office Action, p. 9) (emphasis added).

Appellant respectfully disagrees. Appellant argues that the "graphical user interface," recited within the specification can be interpreted in light of the specification as including at least an electronic display screen and some kind of user input device such as a keyboard or mouse since the specification discloses "present[ing] to a user an image of a document on a screen to which a user can add content." (Appellant's specification, p. 7, ll. 19-21). Therefore, because the "graphical user interface," of Appellant's specification imparts structure, the rejection of claim 32 should not be sustained.

(2) Claims 15-22 and 31-38 are patentable over *Lapstun*:

Claim 15:

Claim 15 recites:

A computer program product for generating an electronic document, the computer program product comprising:  
a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising:

computer usable program code configured to define the electronic document;

in which the computer usable program code comprises first and second portions of data;

***in which the first portion of data defines the content of the electronic document and the second portion comprises data relating to a pattern of position identification markings*** such that, when the electronic document is printed, a pattern reading device is able to determine its position relative to the position identification markings; and

in which the computer usable program code comprises ***a single data file with the first and second data portions being embedded within the data file.***

(Emphasis added).

In contrast, Lapstun does not teach or suggest “[a] computer program product for generating an electronic document, the computer program product comprising a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising computer usable program code configured to define the electronic document, in which the computer usable program code comprises first and second portions of data, in which . . . the second portion comprises data relating to a pattern of position identification markings . . . and in which the computer usable program code comprises a single data file with the first and second data portions being embedded within the data file.” (Claim 15).

Specifically, Lapstun does not teach or suggest, “in which the first portion of data defines the content of the electronic document and the second portion comprises data relating to a pattern of position identification markings . . . in which the computer usable program code comprises a single data file with the first and second data portions being embedded within the data file.” (Claim 15). The final Office Action argues against this point and cites to column 14 lines 11-67 of Lapstun. (final Office Action, p. 3). However, Lapstun simply teaches the following:

As illustrated in FIG. 1, a **printed netpage** 1 can represent a interactive form which can be filled in by the user both physically, on the printed page, and “electronically”, via communication between the pen and the netpage system. The example shows a “Request” form containing name and address fields and a submit button. *The netpage consists of graphic data 2 printed using visible ink, and coded data 3 printed as a collection of tags 4 using invisible ink. The corresponding page description 5, stored on the netpage network, describes the individual elements of the netpage. In particular it describes the type and spatial extent (zone) of each interactive element (i.e. text field or button in the example), to allow the netpage system to correctly interpret input via the netpage.* The submit button 6, for example, has a zone 7 which corresponds to the spatial extent of the corresponding graphic 8. (Lapstun, col. 7, ll. 38-53) (emphasis added).

Therefore, it is clear that Lapstun simply teaches that a **printed** netpage includes graphic data printed on the netpage as visible elements and coded data printed on the netpage as invisible elements, but is silent as to how the graphic data and coded data are electronically stored or otherwise brought together within the printed netpage.

Further, in light of Lapstun’s description of a page description (element 5 above), the final Office Action’s cited portion merely discloses document and page descriptions which make up a formatted document. For example, Lapstun teaches, “[a]t the most abstract level the document 836 has a hierarchical structure whose terminal elements 839 are associated with content objects 840 such as *text objects*, *text style objects*, *image objects*, etc.” (Lapstun, col. 14, ll. 14-16) (emphasis added). However, Lapstun is silent on providing *a single data file* that includes these content objects along with data relating to a pattern of position identification markings within a single data file. In other words, Lapstun is silent on providing *a single data file* that includes content of the electronic document *and* data relating to a pattern of position identification markings.

On this point, the final Office Action argues as follows:

Lapstun clearly teaches at Col. 14 lines 11-67 the **page instance** 830 (i.e. ‘**single data file**’), which consists of ‘a set of terminal element instance’ and the ‘Page ID 50’ encoded in tags. Lapstun further teaches: ‘each page

instance 830 describes a single unique printed netpage 1, and record the page ID 50 of the netpage' at Col. 14 lines 45-46. (final Office Action, p. 9).

However, Lapstun fails to teach that the page ID 50 is encoded in tags. Lapstun, in contrast, particularly teaches that the page ID is assigned to "allow input through otherwise identical pages to be distinguished, "and "has sufficient precision to distinguish between a very large number of netpages." (Lapstun, col. 9, ll. 57-60) (*See also*, Fig. 25, element 50, depicting element 50 as a part of the page instance and not a tag, position mark, etc.). In other words, the page ID 50 of Lapstun simply identifies a particular page within a set of pages, and does not comprise data relating to a pattern of position identification markings.

The final Office Action further argues, "each netpage is the printed copy of the page instance 830, and includes [a] first portion (element 2 of Fig. 1) of data defin[ing] content of the document and [a] second portion (element 3,4 of Fig. 1) compris[ing] data relating to a pattern of position identification markings as claimed. (final Office Action, p. 9). However, as demonstrated above, although Lapstun does depict a single printed document comprising content elements and coded data, it does not follow that Lapstun teaches these two elements are embedded within a single data file.

In contrast, claim 15 recites, "[a] computer program product for generating an electronic document, the computer program product comprising a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising computer usable program code configured to define the electronic document, in which the computer usable program code comprises first and second portions of data, in which . . . the second portion comprises data relating to a pattern of position identification markings . . . and in which the computer usable program code comprises a

single data file with the first and second data portions being embedded within the data file.”

This subject matter is clearly not taught or suggested by Lapstun.

Respectfully, to anticipate a claim, a reference must teach each and every element of the claim, and “the identical invention must be shown ***in as complete detail as contained in the ... claim.***” MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, “[t]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present case, Lapstun clearly does not disclose the claimed invention with each and every claimed element in the same amount of detail or as arranged in the claim. Consequently, because Lapstun clearly fails to satisfy the requirements for anticipating claim 15, the rejection of claim 15 and its dependent claims should not be sustained.

Claim 32:

Claim 32 recites:

A system for producing an electronic document, the system comprising:  
    means for receiving the content of the electronic document,  
    means for receiving data defining a pattern of positional markings  
allocated to at least a portion of the document; and  
    ***means for generating a data structure defining the electronic  
document which data structure comprises first and second portions of data,  
the first portion of data defining the content and the second portion of data  
relating to the pattern.***

(Emphasis added).



In contrast, Lapstun does not teach or suggest “[a] system for producing an electronic document, the system comprising means for receiving the content of the electronic document, means for receiving data defining a pattern of positional markings allocated to at least a portion of the document, and means for generating a data structure defining the electronic document which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern.” (Claim 32).

As an initial matter, the final Office Action argues, “it is noted that the features upon which applicant relies (i.e., “creating a single data file”) are not recited in the rejected claim 32.” (final Office Action, p. 10). However, Appellant respectfully disagrees. Claim 32 recites, “means for generating *a data structure defining the electronic document* which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern.” This recitation clearly indicates the creation of a single electronic document comprising first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern. In other words, claim 32, although not stating in identical terms, claims creating a single data file.

The Office Action argues “Lapstun teaches . . . ‘means for generating a data structure defining the electronic document which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern’ at Col. 14 lines 10-67.” (final Office Action, p. 6). However, this is incorrect.

As similarly argued above in connection with the patentability of independent claim 15, Lapstun does not teach or suggest, “means for generating a data structure defining the electronic document which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern.”

(Claim 32). The final Office Action argues against this point and cites to column 14 lines 10-67 of Lapstun. (final Office Action, p. 6). However, Lapstun simply teaches the following:

As illustrated in FIG. 1, a **printed netpage** 1 can represent a interactive form which can be filled in by the user both physically, on the printed page, and “electronically”, via communication between the pen and the netpage system. The example shows a “Request” form containing name and address fields and a submit button. ***The netpage consists of graphic data 2 printed using visible ink, and coded data 3 printed as a collection of tags 4 using invisible ink. The corresponding page description 5, stored on the netpage network, describes the individual elements of the netpage. In particular it describes the type and spatial extent (zone) of each interactive element (i.e. text field or button in the example), to allow the netpage system to correctly interpret input via the netpage.*** The submit button 6, for example, has a zone 7 which corresponds to the spatial extent of the corresponding graphic 8.

(Lapstun, col. 7, ll. 38-53) (emphasis added).

Therefore, it is clear that Lapstun simply teaches that a **printed** netpage includes graphic data printed on the netpage as visible elements and coded data printed on the netpage as invisible elements, but is silent as to how the graphic data and coded data are electronically stored or otherwise brought together within the printed netpage.

Further, in light of Lapstun’s description of a page description (element 5 above), the final Office Action’s cited portion merely discloses document and page descriptions which make up a formatted document. For example, Lapstun teaches, “[a]t the most abstract level the document 836 has a hierarchical structure whose terminal elements 839 are associated with content objects 840 such as ***text objects, text style objects, image objects***, etc.”

(Lapstun, col. 14, ll. 14-16) (emphasis added). However, Lapstun is silent on providing means for generating a data structure defining the electronic document which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern. In other words, Lapstun is silent on providing ***a single data file*** that includes content of the electronic document ***and*** data relating to a pattern of position identification markings.

On this point, the final Office Action argues as follows:

Lapstun clearly teaches at Col. 14 lines 11-67 the **page instance 830** (i.e. ‘**single data file**’), which consists of ‘a set of terminal element instance’ and the ‘Page ID 50’ encoded in tags. Lapstun further teaches: ‘each page instance 830 describes a single unique printed netpage 1, and record the page ID 50 of the netpage’ at Col. 14 lines 45-46.  
(final Office Action, p. 9).

However, as similarly argued above, the page ID 50 of Lapstun simply identifies a particular page within a set of pages, and does not comprise data relating to a pattern of position identification markings.

The final Office Action further argues, “each netpage is the printed copy of the page instance 830, and includes [a] first portion (element 2 of Fig. 1) of data defin[ing] content of the document and [a] second portion (element 3,4 of Fig. 1) compris[ing] data relating to a pattern of position identification markings as claimed. (final Office Action, p. 9). However, as demonstrated above, although Lapstun does depict a single printed document comprising content elements and coded data, it does not follow that Lapstun teaches these two elements are embedded within a single data file.

In contrast, claim 32 recites, “[a] system for producing an electronic document, the system comprising means for receiving the content of the electronic document, means for receiving data defining a pattern of positional markings allocated to at least a portion of the document, and means for generating a data structure defining the electronic document which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern.” This subject matter is clearly not taught or suggested by Lapstun.

Again, to anticipate a claim, a reference must teach each and every element of the claim, and “the identical invention must be shown *in as complete detail as contained in the*

... *claim.*” MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, “[t]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present case, Lapstun clearly does not disclose the claimed invention with each and every claimed element in the same amount of detail or as arranged in the claim. Consequently, because Lapstun clearly fails to satisfy the requirements for anticipating claim 32, the rejection of claim 32 and its dependent claims should not be sustained.

Claim 33:

Claim 33 recites:

A method for generating an electronic document comprising ***creating an electronic file and storing in that file data and metadata, the data defining at least some content and the metadata relating to a pattern of position identification markings*** arranged to allow a pattern reading device to determine its position within the position identification markings, the electronic file capable of generating an electronic document.  
(Emphasis added).

In contrast, Lapstun does not teach or suggest, “[a] method for generating an electronic document comprising creating an electronic file and storing in that file data and metadata, the data defining at least some content and the metadata relating to a pattern of position identification markings arranged to allow a pattern reading device to determine its position within the position identification markings, the electronic file capable of generating an electronic document.” (Claim 33).

The Office Action argues “Lapstun teaches . . . ‘creating an electronic file and storing in that file data and metadata, the data defining at least some content” at Col. 9 lines 45-55 and Figs. 1, 25-26.” (final Office Action, p. 6). However, this is incorrect.

As similarly argued above in connection with the patentability of independent claims 15 and 32, Lapstun does not teach or suggest, “creating an electronic file and storing in that file data and metadata, the data defining at least some content.” (Claim 33). The final Office Action argues against this point and cites to column 14 lines 11-67 of Lapstun. (final Office Action, p. 9). However, Lapstun simply teaches the following:

As illustrated in FIG. 1, a ***printed netpage*** 1 can represent a interactive form which can be filled in by the user both physically, on the printed page, and “electronically”, via communication between the pen and the netpage system. The example shows a “Request” form containing name and address fields and a submit button. ***The netpage consists of graphic data 2 printed using visible ink, and coded data 3 printed as a collection of tags 4 using invisible ink. The corresponding page description 5, stored on the netpage network, describes the individual elements of the netpage. In particular it describes the type and spatial extent (zone) of each interactive element (i.e. text field or button in the example), to allow the netpage system to correctly interpret input via the netpage.*** The submit button 6, for example, has a zone 7 which corresponds to the spatial extent of the corresponding graphic 8. (Lapstun, col. 7, ll. 38-53) (emphasis added).

Therefore, it is clear that Lapstun simply teaches that a ***printed*** netpage includes graphic data printed on the netpage as visible elements and coded data printed on the netpage as invisible elements, but is silent as to how the graphic data and coded data are electronically stored or otherwise brought together within the printed netpage.

Further, in light of Lapstun’s description of a page description (element 5 above), the final Office Action’s cited portion merely discloses document and page descriptions which make up a formatted document. For example, Lapstun teaches that “[a]t the most abstract level the document 836 has a hierarchical structure whose terminal elements 839 are associated with content objects 840 such as ***text objects, text style objects, image objects,***

etc.” (Lapstun, col. 14, ll. 14-16) (emphasis added). However, Lapstun is silent on creating an electronic file and storing in that file data and metadata, the data defining at least some content and the metadata relating to a pattern of position identification markings. In other words, Lapstun is silent on providing *a single electronic file* that includes content of the electronic document *and* data relating to a pattern of position identification markings.

On this point, the final Office Action argues as follows:

Lapstun clearly teaches at Col. 14 lines 11-67 the **page instance** 830 (i.e. ‘**single data file**’), which consists of ‘a set of terminal element instance’ and the ‘Page ID 50’ encoded in tags. Lapstun further teaches: ‘each page instance 830 describes a single unique printed netpage 1, and record the page ID 50 of the netpage’ at Col. 14 lines 45-46.  
(final Office Action, p. 9).

However, as similarly argued above, the page ID 50 of Lapstun simply identifies a particular page within a set of pages, and does not comprise data relating to a pattern of position identification markings.

The final Office Action further argues, “each netpage is the printed copy of the page instance 830, and includes [a] first portion (element 2 of Fig. 1) of data defin[ing] content of the document and [a] second portion (element 3,4 of Fig. 1) compris[ing] data relating to a pattern of position identification markings as claimed. (final Office Action, p. 9). However, as demonstrated above, although Lapstun does depict a single printed document comprising content elements and coded data, it does not follow that Lapstun teaches these two elements are embedded within a single data file.

Still further, the final Office Action cites to column 9, lines 45-55 of Lapstun in rejecting the recitation, “creating an electronic file and storing in that file data and metadata, the data defining at least some content and the metadata relating to a pattern of position identification markings.” (Claim 33). However, this portion of Lapstun simply discloses,

“[t]he page description describes the visible layout and content of the page, including *text*, *graphics* and *images*. It also *describes the input elements on the page, including buttons, hyperlinks, and input fields*. (Lapstun, col. 9, ll. 48-52) (emphasis added). However, this portion of Lapstun clearly indicates that a page description only includes content and input elements. Lapstun is silent on creating an electronic file and storing in that file data and metadata, the data defining at least some content *and the metadata relating to a pattern of position identification markings*. This subject matter is clearly not taught or suggested by Lapstun.

Again, to anticipate a claim, a reference must teach each and every element of the claim, and “the identical invention must be shown *in as complete detail as contained in the ... claim*.” MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, “[t]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present case, Lapstun clearly does not disclose the claimed invention with each and every claimed element in the same amount of detail or as arranged in the claim. Consequently, because Lapstun clearly fails to satisfy the requirements for anticipating claim 33, the rejection of claim 33 and its dependent claims should not be sustained.

Additionally, various dependent claims of the application recite subject matter that is further patentable over the cited prior art. Specific, non-exclusive examples follow.

Claims 17 and 18:

Claim 17 recites: “[t]he computer program product of claim 15 in which the second portion of data comprises metadata and *in which the computer usable program code includes one or more controls which control the way in which the second portion of data is converted between formats to preserve the pattern.*” (Emphasis added). Claim 18 similarly recites: “[t]he computer program product of claim 16 in which the second portion of data comprises metadata and *in which the computer usable program code includes one or more controls which control the way in which the second portion of data is converted between formats to preserve the pattern.*” (Emphasis added).

In contrast, Lapstun does not teach or suggest, “in which the computer usable program code includes one or more controls which control the way in which the second portion of data is converted between formats to preserve the pattern.” In the first instance, in light of the above arguments presented above in favor of the patentability of independent claim 15 it is clear that Lapstun does not teach or suggest providing *a single data file* that includes content of the electronic document *and* data relating to a pattern of position identification markings.

Further, although the Office Action asserts that the recitations of claims 17 and 18 are taught at column 11, lines 20-65 and column 31, lines 25-50, this is incorrect. (Action, pp. 5-6). Column 11, lines 20-65 discuss generally the physical structure of the tags of Lapstun as they existed printed on a piece of medium. This portion of Lapstun is silent on conversion of any data between formats.

The Office Action then cites to column 31, lines 25-50 of Lapstun. This portion of Lapstun teaches, “[w]hen a non-netpage document is requested on demand, it is not personalized, and it is delivered via a designated netpage formatting server which reformats it



as a netpage document.” (Lapstun, col. 31, ll. 30-33). It is clear that *only the document* of Lapstun is being converted from one format to another. However, Lapstun is silent on converting a second portion of data comprising metadata from one format to another.

In contrast, claims 17 and 18 recite: “in which the computer usable program code includes one or more controls which control the way in which the second portion of data is converted between formats to preserve the pattern.” This subject matter is clearly not taught or suggested by Lapstun.

Again, to anticipate a claim, a reference must teach each and every element of the claim, and “the identical invention must be shown *in as complete detail as contained in the ... claim.*” MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, “[t]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present case, Lapstun clearly does not disclose the claimed invention with each and every claimed element in the same amount of detail or as arranged in the claim. Consequently, because Lapstun clearly fails to satisfy the requirements for anticipating claims 17 and 18, the rejection of claims 17 and 18, and their respective dependent claims should not be sustained.

Claims 19 through 22:

Claim 19 recites, “[t]he computer program product of claim 15 in which the data in

the second portion comprises any one or more of the following: data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking.” (Emphasis added). Claims 20 through 22 contain similar recitations. In contrast, Lapstun does not teach or suggest “in which the data in the second portion comprises any one or more of the following: data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking.” (Claims 19 through 22). In rejecting claims 19 through 22, the Office Action cites to column 12, lines 10-65.

Applicant notes that this portion of Lapstun generally discloses the use of a netpage pen in detecting, processing and decoding tags within a document *after* the tags have been printed to a medium. In other words, this portion of Lapstun simply teaches the use of a netpage pen in imaging the tags and does not discuss data from which an algorithm can generate the pattern or co-ordinates or other metadata identifying the portion of the position identification marking. Thus, this portion of Lapstun simply does not disclose the recitations of claims 19 through 22.

Further, Applicant asserts that Lapstun is silent with regard to “data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking.” (Claims 19 through 22). Lapstun teaches tags that identify the page description and the tag’s own position on a page. However, nowhere does Lapstun teach or suggest data from which an algorithm can generate a pattern or co-ordinates or other metadata identifying the portion of the position identification marking.

In contrast, claims 19 through 22 recite: “in which the data in the second portion comprises any one or more of the following: data from which an algorithm can generate the

pattern; co-ordinates or other metadata identifying the portion of the position identification marking.” This subject matter is simply not taught or suggested by Lapstun.

Again, to anticipate a claim, a reference must teach each and every element of the claim, and “the identical invention must be shown *in as complete detail as contained in the ... claim.*” MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, “[t]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present case, Lapstun clearly does not disclose the claimed invention with each and every claimed element in the same amount of detail or as arranged in the claim. Consequently, because Lapstun clearly fails to satisfy the requirements for anticipating claims 19 through 22, the rejection of claims 19 through 22, and their respective dependent claims should not be sustained.

(3) Claims 23-30 are patentable over *Lapstun* and *Ethier*:

Claims 23 through 30:

Claim 23 recites: “The computer program product of claim 15 ***in which the second portion of data is provided in XML.***” (Emphasis added). Claims 24 through 30 contain similar recitations.

The final Office Action uses impermissible hindsight in reconstructing the recitations of claims 23 through 30. The final Office Action concedes, “[Lapstun] does not teach ‘the second portion of data is provided in XML.’” (final Office Action, p. 8). Thus, the final Office Action cites to Ethier, and argues, “it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Ethier with Lapstun so that ‘the document can be transformed back and forth between a binary format and a markup language format without loss of desired information’ as suggested by Ethier at Col. 4 lines 58-65.” (final Office Action, p. 8). However, this is incorrect. Lapstun and Ethier all relate to different arts and classes of invention. Lapstun pertains to methods and devices for coding and for recording of information from a surface. (See, Lapstun, Abstract). Ethier is directed to systems and techniques to create and use a reversible format document. Further, both cited prior art references are classified under different international and U.S. classes of invention.

Still further, these prior art references clearly have distinct differences in function and structure. The product of Lapstun is structurally and functionally different from the reversible document format of Ethier in that the former is a physical document that functions to record information written in the document whereas the latter is embodied in code only and simply functions to convert a portion of the electronic document from one format to another. In fact, ***the only similarity*** among Lapstun and Ethier is that ***in some embodiments***,

the inventions, or products resultant from the application of methods taught therein relate to computer processing of data. Appellant respectfully asserts that these prior art references' respective arts are too attenuated to be considered "analogous." Appellant points out that "while Patent Office classification of references and the cross-references in the official search notes of the class definitions are some evidence of 'nonanalogy' or 'analogy' respectively, the court has found 'the similarities and differences in structure and function of the inventions to carry far greater weight.' *In re Ellis*, 476 F.2d 1370, 1372, 177 USPQ 526, 527 (CCPA 1973)." (MPEP § 2141.01(a)).

In light of the above, it is clear that the final Office Action has failed to provide a sufficient rational underpinning for combining Lapstun and Ethier. Without some reason in the references to combine the cited prior art teachings, with some rational underpinnings for such a reason, the Examiner's conclusory statements in support of the alleged combination fail to establish a prima facie case for obviousness. *See, KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007) (obviousness determination requires looking at "whether there was an apparent reason to combine the known elements in the fashion claimed...", *citing In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness," *KSR* at 14)).

Further, "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Still further, "it is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780, (Fed. Cir. 1992). Therefore, because the final Office Action employs

impermissible hindsight in combining the nonanalogous prior art references of Lapstun and Ethier, the rejection of claims 23 through 30 should not be sustained.

In view of the foregoing, it is submitted that the final rejection of the pending claims is improper and should not be sustained. Therefore, a reversal of the Rejection of April 19, 2010 is respectfully requested.

Respectfully submitted,

/Steven L. Nichols/

DATE: August 9, 2010

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### **VIII. CLAIMS APPENDIX**

1-14. (cancelled)

15. (previously presented) A computer program product for generating an electronic document, the computer program product comprising:

a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising:

computer usable program code configured to define the electronic document;

in which the computer usable program code comprises first and second portions of data;

in which the first portion of data defines the content of the electronic document and the second portion comprises data relating to a pattern of position identification markings such that, when the electronic document is printed, a pattern reading device is able to determine its position relative to the position identification markings; and

in which the computer usable program code comprises a single data file with the first and second data portions being embedded within the data file.

16. (previously presented) The computer program product of claim 15 which is written such that the computer usable program code can be converted from one format to other formats without losing any of the information from the electronic document.

17. (previously presented) The computer program product of claim 15 in which the second portion of data comprises metadata and in which the computer usable program code

includes one or more controls which control the way in which the second portion of data is converted between formats to preserve the pattern.

18. (previously presented) The computer program product of claim 16 in which the second portion of data comprises metadata and in which the computer usable program code includes one or more controls which control the way in which the second portion of data is converted between formats to preserve the pattern.

19. (previously presented) The computer program product of claim 15 in which the data in the second portion comprises any one or more of the following: data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking.

20. (previously presented) The computer program product of claim 16 in which the data in the second portion comprises any one or more of the following: data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking.

21. (previously presented) The computer program product of claim 17 in which the data in the second portion comprises any one or more of the following: data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking.



22. (previously presented) The computer program product of claim 18 in which the data in the second portion comprises any one or more of the following: data from which an algorithm can generate the pattern; co-ordinates or other metadata identifying the portion of the position identification marking.

23. (previously presented) The computer program product of claim 15 in which the second portion of data is provided in XML.

24. (previously presented) The computer program product of claim 16 in which the second portion of data is provided in XML.

25. (previously presented) The computer program product of claim 17 in which the second portion of data is provided in XML.

26. (previously presented) The computer program product of claim 18 in which the second portion of data is provided in XML.

27. (previously presented) The computer program product of claim 19 in which the second portion of data's provided in XML.

28. (previously presented) The computer program product of claim 20 in which the second portion of data is provided in XML.

29. (previously presented) The computer program product of claim 21 in which the second portion of data is provided in XML.

30. (previously presented) The computer program product of claim 22 in which the second portion of data is provided in XML.

31. (previously presented) The computer program product of claim 15 in which a schema is provided.

32. (previously presented) A system for producing an electronic document, the system comprising:

means for receiving the content of the electronic document,

means for receiving data defining a pattern of positional markings allocated to at least a portion of the document; and

means for generating a data structure defining the electronic document which data structure comprises first and second portions of data, the first portion of data defining the content and the second portion of data relating to the pattern.

33. (previously presented) A method for generating an electronic document comprising creating an electronic file and storing in that file data and metadata, the data defining at least some content and the metadata relating to a pattern of position identification markings arranged to allow a pattern reading device to determine its position within the position identification markings, the electronic file capable of generating an electronic document.

34. (previously presented) A method according to claim 33 in which a file embedding mechanism is used to embed metadata within the electronic document.
35. (previously presented) The computer program product of claim 15, in which the pattern reading device is a digital pen.
36. (previously presented) The method of claim 33, in which the pattern reading device is a digital pen.
37. (previously presented) The computer program product of claim 31, in which the schema is an XML schema.
38. (previously presented) The method of claim 34, in which the metadata is XML metadata.

**IX. Evidence Appendix**

None

**X. Related Proceedings Appendix**

None